SYNOPSIS of PhD Thesis

Psychological Factors Influencing the Academic Motivation of Learners In a Synchronous e-learning Environment

by

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Introduction

The Self Determination Theory (SDT) is the most extensively used theory in e-learning literature (Roca & Gagne, 2008). The SDT concerns the growth tendencies and innate psychological needs (Deci & Ryan, 2000) of the learner. These psychological needs are rooted not only in self but the various dimensions of an e-learning environment. Extant literature identifies the involvement of six dimensions (Asoodar et al., 2016): learner, instructor, design, course, technology and environment, and the various factors related to them to motivate learners in e-learning. However, all six dimensions are not captured by SDT; this study identifies the use of the ARCS theory of instructional design, Expectancy Value theory, and Theory of Reasoned action for studying the holistic view of dimensions (Asoodar et al., 2016) in e-learning for studying the motivation of learners.

The e-learning market in India is the second largest after the US, and the forecasts suggest a growth of 15.64%. The growth is expected to go beyond $48 billion by the end of 2020 (Walia, 2020). The user base of e-learning in India is expected to grow at a CAGR of 44% and Higher education (graduate and postgraduate) through online medium, especially for MBA course is experiencing wide acceptance among learners in the country. Hence, motivating learners to effective e-learning is an area offering ample opportunity for research to contribute to practice.

1.Background of the Research

Learners today are influenced by a digital world, which is connected, accessible, and interactive (Pirker et al., 2016). With the strategic and economic advantage of digital

learning, both corporate and academic organizations have been advocating and implementing sophisticated and upgraded technology-based learning. Digital learning is experiencing sporadic acceptance across global organizations (Karakirios & Kekkeris, 2014). Also, the only pragmatic and cost-effective measure to meet the rising per capita income and subsequently rising demand for educating a large population of learners is to go online. However, the need to ensure successful and effective learning remains a challenge. The e-learning courses do not only hold the pressure of educating the learners but also need to overcome barriers such as transactional distance, instating their motivation towards the academic subject is also crucial to e-learning success.

Motivation of learners has been identified to be a key factor affecting learning effectiveness and learning theories of contemporary times also suggest that learner motivation is influenced by a gamut of intrinsic and extrinsic factors (Asoodar et al., 2016). Hence, stakeholders need to put the best strategies in place to sustain the interests of both learners as well as other stakeholders. In this regard a synchronous and long –term course is important as research emphasizes on duration (Tuporova & Toparov, 2005) and instructor's presence (Hrastinski , 2009) is important for learner motivation. However, research is skewed towards cognitive and technological aspects of the learning environment. Psychological aspects of an e-learning environment have not been addressed aptly. Also, a strong theoretical foundation in enhancing the academic motivation of learners is imperative to e-learning success.

This is indeed a gap where there is ample opportunity for research to contribute to practice. This research studied the influence of psychological factors on the academic motivation of learners in a synchronous e-learning environment. The purpose is to

study whether these factors hold true to a synchronous long-term e-learning program in India, to understand how these constructs interact with each other for enhancing learner motivation in an e-learning environment.

Literature Review

This chapter presents the detailed review of literature in two parts. A total of 238 articles (138 – part A & 100 – part B) have been considered for the literature review. The first part of this section provides a detailed review of the emerging themes of e-learning methods in organizations. It also identifies the associated factors influencing the world of e-learning and critically examines the changing trends of the factors with the evolution of the web from the perspective of the stakeholders. In total 138 articles were reviewed to identify the various themes and corresponding contributing factors. Based on the results, a thematic literature review is detailed in the first part. The results from the first part highlight the extensive influence of learner's motivation towards e-learning success. A comprehensive search process on motivation in e-learning was subsequently adopted to arrive at a systematic literature review (Grant & Booth, 2009), which is detailed in the second part of the section. For studying motivation in e-learning, a content analysis was done for 100 relevant articles from online databases, published between the years 2009 to 2018. The study identifies the primary motivating factors for digital learners and categorizes them along six different dimensions.

Part -1

The extant literature suggests the involvement of people from multiple disciplines (Hughes & Hay, 2001) in the e-learning process, who bring differing yet valuable perspectives to themes like challenges and critical success factors in e-learning (Hughes & Hay, 2001). Therefore the first part of the literature review attempts to understand the themes in e-learning from the perspective of its stakeholders. For the purpose of this review electronic databases like Google scholar, Proquest, Ebsco and JSTOR were searched following keywords such as e-learning, web-based learning and online learning effectiveness in organizations. The shortlisted articles underwent several layers of screening to arrive at 138 articles. A qualitative evidence synthesis (Booth et al., 2012) is used to identify major themes of e-learning, theories and models, challenges, and success factors that emerged from the literature review. Factors contributing to the themes are identified, and these factors are segregated as per the stakeholder and the web era they influenced. For the purpose of segregation of web era, four Web eras were considered namely Web 0.0 (1989-1995), Web 1.0 (1996-2005), Web 2.0 (2007-2015); and Web 3.0 and Web 4.0 (2016 onwards considered together) (Aghaei et al., 2012). Various themes emerged from this review, from the perspective of stakeholders across different eras of the web.. Further, the factors (under various themes) relevant across web eras were identified. Results suggest the factors and the related theories have shown a huge variability in their applications, and no major repetitive occurrences have been observed in the body of extant literature. While more control on the learning process and absence of socio-economic barriers on the digital platform has empowered e-learners across the web era, transactional distance is still the major

disadvantage. In this scenario, the instructor's role in motivating and guiding the learner's intention by exhibiting high immediacy behavior in digital becomes decisive in mitigating the effects of computer anxiety and dropout rates, which continue to be the major challenges faced across generations.

Part 2

It is suggestive that luring the learners to be involved in the process of e-learning and to enjoy the digital experience is crucial to successful e-learning as observed in part one. The second part of the literature review presents a systematic review of the literature on the factors that motivate learners in an e-learning environment .A content analysis was done for 100 relevant articles from online databases, published between the years 2009 to 2018. An exhaustive screening process arrived 100 articles directly relevant to the context. . Further, a content analysis of the literature was conducted to establish a holistic review. The analysis categorizes the literature stepwise, first under the geographical distribution of the studies, second on the year they were published, and then on the emerging factors of motivation for learners on digital platforms. The factors identified were classified into six dimensions (Asoodar, 2016): "learner, instructor, course, technology design, and environment". Further, this study analyzed the statistically represented data for dimensional, year-wise, and frequency analysis. The Pareto analysis was further conducted to identify the major contributing factors along each dimension with respect to the number of articles discussing them. The study revealed some interesting results with respect to motivational factors influencing the digital world of learning. It is observed that the contribution of developed nations in the field outreaches the contributions of developing nations.

Even though Asia and Asia-pacific region contribute 28% of the studies, not a single study has been reported from India. A Pareto analysis identified 19 different motivational factors across a dimension that has dominated the research in the field (Fig1.1). A majority of the factors held the property of the learner dimension; however, there was a declining trend of the factors in the dimension across the decade.

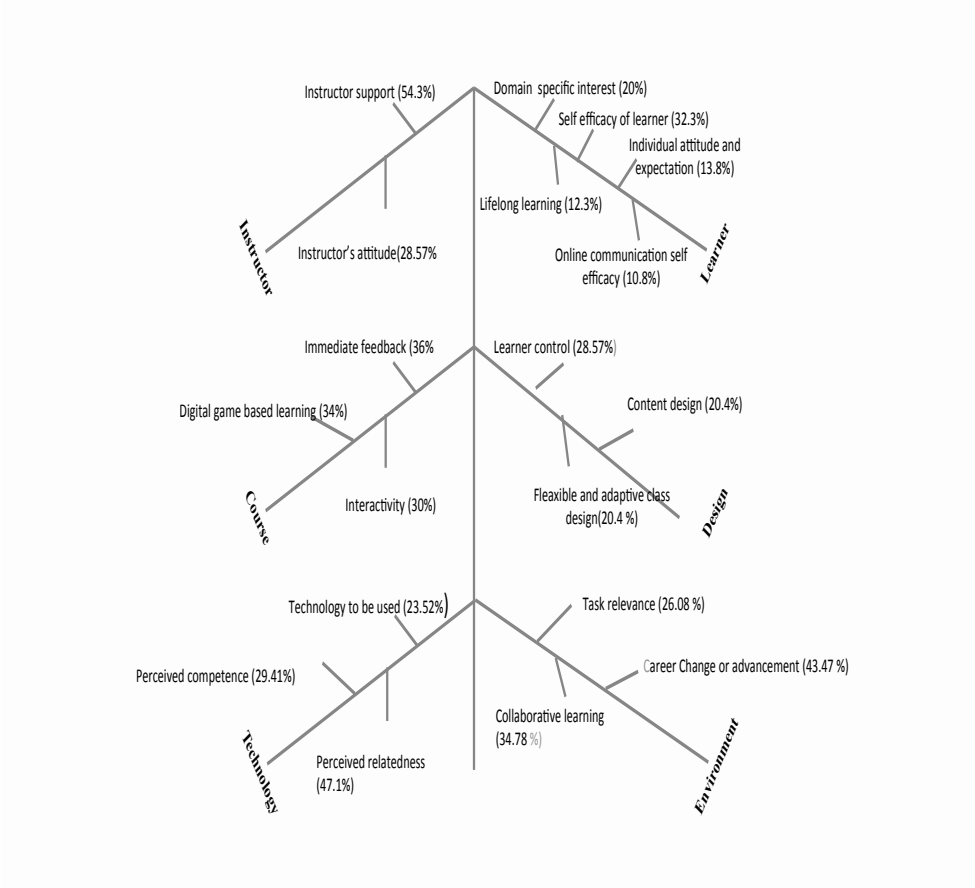

Fig 1.1 Influential factors of motivation for e-learners across six dimensions

Research Gap

Research (Hsu et al., 2019) in online learning suggests the need to understand motivational aspects of different dimensions of an e-learning environment and SDT

based investigations alone; fails to predict learning outcomes across the various dimensions (Asoodar et al., 2016) in an e-learning set up (Chen & Jang, 2010). Hence, the pertinent question is which theory(s) can capture all dimensions of an e-learning environment to understand the motivation of the learner? In response to this question authors have investigated the dimensions independently using four different theoretical lenses like the ARCS theory of instructional design (Keller, 2004), Expectancy Value theory (Fryer & Bovee, 2016), Theory of Reasoned action (Roca & Gagne, 2008) and Self- Determination theory (However, none of the studies evaluate the motivational aspects of all these dimensions (Asoodar et al., 2016) put together. Therefore, this study would like to fill this gap by identifying which theories enable the analysis of the motivation of the learner in an e-learning environment.

Researchers have emphasized longer duration of courses for better learning outcomes (Akyol, 2008) however with more dropouts (Willging & Jhonson, 2009). Authors have also expressed their reservations in online delivery of certain subjects in MBA like business statistics (Grandzol, 2010) . In the same context, Dewan et al., 2015 also emphasized the motivational aspects of long duration online courses. Hrastinski (2009) argues that a synchronous environment enhances the motivation of students, subsequently improving their online participation. Researcher's opinion is divided on the effectiveness of synchronous over asynchronous e-learning, where authors (Ogbona et al., 2019; Hadullo et al., 2018) identify asynchronous learning to be more effective. Considering this division in opinion among the researchers, understanding the motivational aspects become increasingly important and the glaring question is what factors influence the motivation of learners in a long duration synchronous online MBA course, which the present study would also like to address.

Motivation comprises of intrinsic, extrinsic, and amotivation component Academic motivation is observed to cover all three components where "This desire of the learner (as reflected in his approach, persistence, and level of interest) regarding academic subjects when the learner's competence is judged against a standard of performance or excellence (Moos & Marroquin, 2010; Panisoara et al., 2015) is identified as academic motivation." As the purpose of this study is to understand the collective influence of the psychological factors on motivation, it is imperative to measure the academic motivation of learners, comprising of all three components of motivation.

Several studies have addressed the issue of e-learning motivation in European (Wild, 2002) and Asian (Mahmod et al., 2005) countries, however not many studies have been conducted in the Indian context. Considering the growing young population and rising GER in the country, it is imperative to understand what influences the motivation of e-learners in India. Hence, researchers, scholars, and practitioners must trace the likely consequences of the holistic influence of the psychological factors on the academic motivation of learners in a synchronous e-learning environment. Therefore, the objective of this thesis is to identify the psychological factors that influence the academic motivation of learners in a long duration synchronous online business management course in the Indian context.

Objective of the Research

The literature suggests that individual characteristics like the motivation of learners are instrumental to effective learning, and multidimensional aspects (Asoodar et al., 2016) of the learning environment motivate the e-learner. However, a divided opinion of researchers on synchronicity (Hrastinski, 2009), duration (Tuporova &

Toparov, 2005) and subject-oriented online courses (Mahmod et al., 2005; Blass & Weight, 2005) is evident. While the individual influence of the above-mentioned aspects cannot be undermined, this study looks at the cohesive contribution of these aspects of an e-learning environment motivation of learners in a synchronous e-learning environment.

Therefore, this study would like to address the following research question:

- *What psychological factors influence the academic motivation of learners in a long-term synchronous online business management course in the Indian context?*

Methodology

The sample for the study was restricted to students undertaking online learning for a single course i.e., Management in Business Administration (MBA, duration one to two years) in a particular country, India. The design of the course in terms of duration, content and structure were comparable. It was decided to collect data from learners enrolled in eminent B-schools in India cities namely Ahmedabad, Kolkata, Jamshedpur, and Kozhikode.

The proposed conceptual framework suggests the need to measure six different variables. The first part of the two-fold questionnaire included demographic details of the participant while the second part comprised 54 items arranged randomly, measuring both dependent and independent variables in the conceptual framework. The study employs four different scales, viz Basic Psychological Needs at Work Scale (BSNSW), Instructional Material Motivational Survey (IMMS), Behavioral Intention

Scale (BIS) and Academic Motivation Scale (AMS) adopted from the extant literature, to explain their relationships.

The results from pilot study found items in the scale to be non-repetitive and independent of one another to capture the six constructs used in the study. As the Relatedness component of the BSNS scale did not consider the aspect of peer-to-peer interaction, the BSNW scale was used in the final questionnaire.

As the data found in the pilot study was found suitable for analysis, in the final study the same questionnaire was circulated. All courses in the IDL program were in English. The questionnaire having 54 items was circulated online using Google doc. It was aimed to collect data from all students enrolled in a long duration online management course (at least one year) in the selected tier 1 institutions and the number of questionnaires sent out were 1200 and the final number of responses were 414 with one or more missing data value accounting for 1.8% of the sample. The missing data points were replaced with the mean of the data for the item to prepare the data for further analysis. .

First, the demographic characteristics of the respondents are observed. The data was found to be reliable, hence a structural equation modeling (SEM) is employed to test the multivariate relationships hypothesized among the various psychological factors of motivation in e-learning and the outcome variable of academic motivation (Byrne, 2001). The IBM-SPSS version 25 was used for the analysis of the descriptive statistics, tests of assumption, and reliability tests.

Further, various models were analyzed as per the competing model hypothesis using the Analysis of Moment Structures program (AMOS, version 25). Maximum likelihood estimation methods were followed both for confirmatory factor analysis and structural model. A bootstrapping test was followed to test the estimates under a different set of samples. Subsequently, this study a moderator analysis of the best fitting model verifies the role of gender and academic gap as moderator influencing the academic motivation of learners in a synchronous e-learning environment.

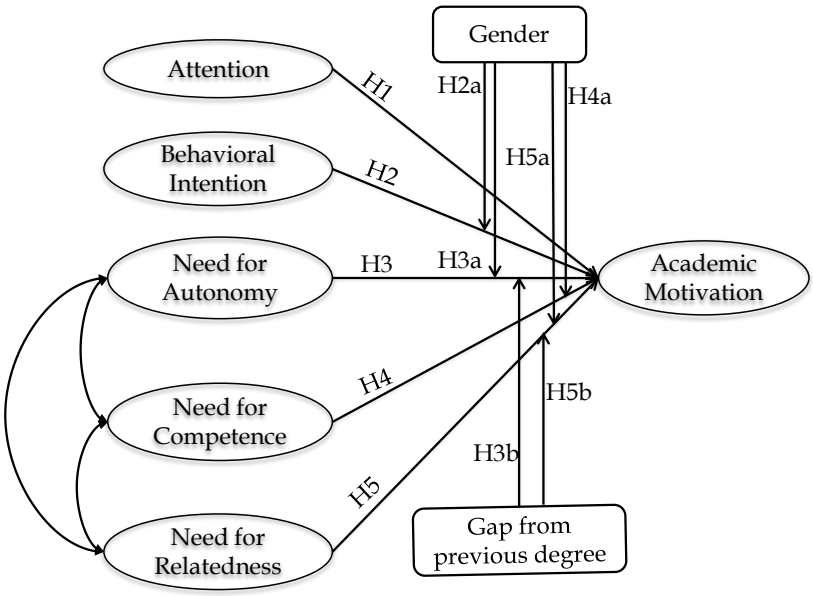

Fig 1.2 Structural model with moderating influence

Contribution

This research contributes to multiple aspects of e-learning; themes in e-learning, stakeholders, and motivation in e-learning, the present study uses a combination of four theoretical lenses to look at academic motivation of learners in a synchronous e-learning environment and enriches the understanding regarding academic motivation of learners enrolled in higher education in the context of an emerging economy like India. The study adds to the research in learning and development by empirically

validating the relationship between basic psychological needs and two other psychological factors of motivation, namely attention and behavioral intention, with the learner's academic motivation in a synchronous e-learning environment. The present study Identifies the influential psychological factors in academic motivation, and subsequent academic learning, also while enabling the stakeholders to cope up with the challenges in academic operations .The present study identifies the psychological factors after having considered the motivational factors across all six dimensions (Asoodar et al., 2016) of e-learning system and further establishes their relationship to the academic motivation of learners. These factors considered in the model facilitate the e-learning providers, designers, and instructors to get an insight into the learner's psychological requirements that can help them motivate the learners. It can also help them to identify items specific to the relevant constructs, and the voice of learner can be included during the performance evaluation of the stakeholders.

Limitations

The quantitative nature of the study may not be able to establish the causality, as academic motivation is a psychological construct. Future research should also consider an experimental study or an in-depth qualitative study to assess the influence of the listed psychological factors on the academic motivation of the learner. The data in this study is limited primarily to the learners' academic motivation for the entire program, future research can consider the motivation and academic performance of learners over various semesters. A mixed approach would have resulted in a good understanding of the learners' psychology.

Future Scope

A look into the time-series data to study the motivation of the learners at various intervals of the specified course could have unraveled the changing degrees of motivation of learner at various stages of the course. This study is a cross-sectional study, a comprehensive study measuring the academic motivation of learners both at the beginning and end of the long-term course can result in important enhancements in the course operation for e-learning success.